

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

- 925 Cigarette Smoking Among Adults — United States, 1993
- 930 Abortion Surveillance: Preliminary Data — United States, 1992
- 939 State-Specific Trends Among Women Who Did Not Receive Prenatal Care — United States, 1980–1992
- 943 Bolivian Hemorrhagic Fever — El Beni Department, Bolivia, 1994
- 946 Notices to Readers



Health Objectives for the Nation

Cigarette Smoking Among Adults — United States, 1993

The annual prevalence of cigarette smoking among adults in the United States declined 40% during 1965–1990 (from 42.4% to 25.5%) (1) but was virtually unchanged during 1990–1992 (2). To determine the prevalence of smoking among adults, smoker interest in quitting, and the prevalence of cessation (i.e., quit ratio) among adults during 1993, the Year 2000 Health Objectives Supplement of the 1993 National Health Interview Survey (NHIS-2000) collected self-reported information about cigarette smoking from a random sample of civilian, noninstitutionalized adults aged ≥18 years. This report presents the prevalence estimates for 1993 and compares them with estimates from the 1992 Cancer Epidemiology Supplement and presents 1993 estimates for smoker interest in quitting completely and the prevalence of cessation among ever smokers.

The overall response rate for the 1993 NHIS-2000 (n=20,860) was 81.2%. For 1993, current smoking status was determined through two questions: "Have you smoked at least 100 cigarettes in your entire life?" and "Do you now smoke cigarettes every day, some days, or not at all?" Ever smokers were persons who reported having smoked at least 100 cigarettes during their entire lives. Current smokers were defined as those who had smoked 100 cigarettes and now smoked either every day (i.e., daily smokers) or some days (i.e., some-day smokers). Former smokers had smoked at least 100 cigarettes in their lives but did not currently smoke. The prevalence of cessation was the percentage of former smokers among ever smokers. Interest in quitting smoking was assessed using answers to the question "Would you like to completely stop smoking cigarettes?" Data were adjusted for nonresponse and weighted to provide national estimates. Confidence intervals (CIs) were calculated using standard errors generated by the Software for Survey Data Analysis (SUDAAN) (3).

Prevalence estimates for 1992 were based on two definitions of current smoking and were calculated by averaging the estimates generated by each definition (2). One of the 1992 definitions of current smoking (smoking every day or some days) was identical to the definition used in 1993; these estimates are compared in this report.

In 1993, an estimated 46 million (25.0% [95% CI=±0.7%]) adults in the United States were current smokers (Table 1): 20.4% (95% CI=±0.7%) were daily smokers, and 4.6%

Cigarette Smoking — Continued

TABLE 1. Percentage of adults aged ≥18 years who were current cigarette smokers,* by sex, race/ethnicity, education level, age group, and socioeconomic status — National Health Interview Survey (NHIS), United States, 1992 and 1993†

Characteristic	1992 CES‡			1993 NHIS-2000†		
	Men		Total	Men		Total
	(n=5,065)	(n=6,816)		(n=8,783)	(n=12,077)	
	% (95% CI)**	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Race/Ethnicity††						
White	28.3 (± 1.6)	26.3 (± 1.5)	27.3 (± 1.1)	27.0 (± 1.2)	24.0 (± 1.0)	25.4 (± 0.8)
Black	30.1 (± 4.7)	24.9 (± 3.1)	27.3 (± 2.7)	32.4 (± 3.4)	21.0 (± 2.2)	26.0 (± 2.0)
Hispanic	22.3 (± 4.0)	15.6 (± 3.2)	18.7 (± 2.6)	28.3 (± 4.2)	12.7 (± 2.7)	20.4 (± 2.6)
American Indian/ Alaskan Native‡‡	41.2 (± 17.7)	42.5 (± 14.5)	41.9 (± 10.9)	35.9 (± 13.6)	40.9 (± 11.8)	38.7 (± 8.7)
Asian/Pacific Islander	19.3 (± 7.7)	4.9 (± 3.7)	12.2 (± 4.5)	27.4 (± 7.2)	9.5 (± 4.8)	18.2 (± 4.1)
Education (yrs)††						
≤8	27.8 (± 4.9)	17.7 (± 3.4)	22.4 (± 2.9)	28.5 (± 3.7)	13.6 (± 2.6)	20.5 (± 2.3)
9-11	40.3 (± 4.9)	31.9 (± 3.8)	35.6 (± 3.2)	42.1 (± 4.4)	32.3 (± 2.9)	36.8 (± 2.7)
12	33.5 (± 2.7)	29.2 (± 2.2)	31.1 (± 1.8)	32.0 (± 1.9)	26.9 (± 1.5)	29.2 (± 1.2)
13-15	26.4 (± 3.3)	23.8 (± 2.7)	25.0 (± 2.1)	28.4 (± 2.4)	22.1 (± 1.9)	25.0 (± 1.5)
≥16	17.6 (± 2.4)	15.0 (± 2.5)	16.5 (± 1.7)	14.8 (± 1.7)	11.9 (± 1.6)	13.5 (± 1.2)
Age group (yrs)						
18-24	28.4 (± 4.1)	25.9 (± 3.7)	27.1 (± 2.8)	28.8 (± 3.3)	22.9 (± 2.7)	25.8 (± 2.1)
25-44	32.7 (± 2.1)	28.7 (± 2.0)	30.6 (± 1.5)	31.1 (± 1.6)	27.3 (± 1.3)	29.2 (± 1.1)
45-64	26.3 (± 2.7)	26.5 (± 2.4)	26.4 (± 1.8)	29.2 (± 2.0)	23.0 (± 1.7)	26.0 (± 1.3)
≥65	16.0 (± 2.8)	12.9 (± 2.0)	14.2 (± 1.6)	13.5 (± 2.2)	10.5 (± 1.3)	11.8 (± 1.2)
Socioeconomic status***						
At/Above poverty level	26.9 (± 1.4)	24.5 (± 1.4)	25.7 (± 1.0)	26.1 (± 1.2)	21.7 (± 0.9)	23.8 (± 0.8)
Below poverty level	35.1 (± 5.3)	28.9 (± 3.7)	31.4 (± 3.2)	38.1 (± 4.1)	28.2 (± 2.7)	32.1 (± 2.4)
Unknown	33.6 (± 5.7)	22.3 (± 3.7)	26.7 (± 3.2)	37.6 (± 4.9)	22.2 (± 3.0)	28.3 (± 2.8)
Total	28.0 (± 1.4)	24.8 (± 1.3)	26.3 (± 1.0)	27.7 (± 1.1)	22.5 (± 0.9)	25.0 (± 0.7)

* Persons who reported having smoked at least 100 cigarettes and who reported now smoking every day or some days.

† Excludes 168 respondents with unknown smoking status.

‡ Cancer Epidemiology Supplement.

§ Year 2000 Health Objectives Supplement.

** Confidence interval.

†† Excludes 257 respondents in unknown, multiple, and other race categories.

‡‡ Estimates should be interpreted with caution because of the small number of cases.

§§ Persons aged ≥25 years.

*** Poverty statistics are based on definitions developed by the Social Security Administration in 1964, subsequently modified by federal interagency committees in 1969 and 1980, and prescribed by the Office of Management and Budget as the standard to be used by federal agencies for statistical purposes.

Cigarette Smoking — Continued

(95% CI=±0.3%) were some-day smokers. Smoking prevalence was significantly higher among men (27.7% [95% CI=±1.1%] [24 million men]) than among women (22.5% [95% CI=±0.9%] [22 million women]) (Table 1). The racial/ethnic group-specific prevalence was highest among American Indians/Alaskan Natives (38.7% [95% CI=±8.7%]) and lowest among Asians/Pacific Islanders (18.2% [95% CI=±4.1%]). The prevalence of smoking among persons with ≤8 years of education was significantly lower than that among persons with 9–15 years of education; however, among persons with ≥9 years of education, prevalences varied inversely with education level. For all groups, the prevalence of smoking was highest among males who had dropped out of high school (42.1% [95% CI=±4.4%]). Smoking prevalence was higher among persons living below the poverty level* (32.1% [95% CI=±2.4%]) than among those living at or above the poverty level (23.8% [95% CI=±0.8%]).

The prevalence of current smokers in 1993 was unchanged statistically from 1992 (25.0% and 26.3%, respectively). However, the prevalence of daily smoking in 1993 (20.4% [95% CI=±0.7%]) was significantly lower than in 1992 (22.3% [95% CI=±0.9%]). In addition, prevalence estimates for current smokers during 1993 were lower overall for women, persons with a college education or higher, total persons living at or above the poverty level, and women living at or above the poverty level (Table 1).

Of current smokers, an estimated 32 million persons (69.7% [95% CI=±1.6%]) reported they wanted to quit smoking completely. Women were more likely to report an interest in quitting (72.7% [95% CI=±1.9%]) than men (67.1% [95% CI=±2.2%]). Current smokers aged ≥65 years (49.9% [95% CI=5.8%]) were the least likely to report that they wanted to completely stop smoking.

In 1993, an estimated 46 million adults were former smokers (49.6% [95% CI=±1.2%] of ever smokers) (Table 2). The prevalence of cessation was higher among men (51.9% [95% CI=±1.5%]), whites (51.6% [95% CI=±1.3%]), and persons living at or above the poverty level (52.4% [95% CI=±1.2%]), and increased directly with age. Among education levels, the prevalence of cessation was lowest among persons with 9–11 years of education (38.2% [95% CI=±3.3%]).

Reported by: Epidemiology Br, Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion, CDC.

Editorial Note: Although the overall prevalence of current smoking did not change from 1992 to 1993, the prevalence of daily smoking declined during 1993, possibly reflecting the proliferation of restrictive worksite and public smoking policies (4). In addition, the relatively greater decline among women is consistent with a previous report that, in workplace settings, women may be more likely to quit smoking because of worksite smoking bans (5).

Differences in prevalence among racial/ethnic groups may be influenced by differences in education levels and socioeconomic status, as well as by social and cultural phenomena. For example, in a recent report (6), the prevalence of behavioral risk factors, including cigarette smoking, was generally higher among persons with ≤12 years of education.

*Poverty statistics are based on a definition originated by the Social Security Administration in 1964, subsequently modified by federal interagency committees in 1969 and 1980, and prescribed by the Office of Management and Budget as the standard to be used by federal agencies for statistical purposes.

*Cigarette Smoking — Continued***TABLE 2. Percentage of interest in quitting among current smokers aged ≥ 18 years* and prevalence of cessation among ever smokers aged ≥ 18 years,[†] by sex, race/ethnicity, education level, age group, and socioeconomic status — National Health Interview Survey, United States, 1993[‡]**

Characteristic	Interest in quitting among current smokers (n=5,261)		Prevalence of cessation among ever smokers (n=10,370)	
	%	(95% CI) [§]	%	(95% CI)
Sex				
Men	67.1	(\pm 2.2)	51.9	(\pm 1.5)
Women	72.7	(\pm 1.9)	46.7	(\pm 1.6)
Race/Ethnicity**				
White	70.0	(\pm 1.8)	51.6	(\pm 1.3)
Black	71.4	(\pm 4.8)	37.8	(\pm 3.4)
Hispanic	68.7	(\pm 5.8)	44.3	(\pm 5.0)
American Indian/ Alaskan Native ^{††}	65.0	(\pm 14.5)	35.1	(\pm 16.6)
Asian/Pacific Islander	60.2	(\pm 12.2)	46.1	(\pm 8.7)
Education (yrs)^{‡‡}				
≤ 8	62.6	(\pm 5.5)	56.2	(\pm 3.9)
9–11	67.8	(\pm 4.4)	38.2	(\pm 3.3)
12	71.5	(\pm 2.2)	45.3	(\pm 1.7)
13–15	71.8	(\pm 3.6)	50.7	(\pm 2.3)
≥ 16	67.5	(\pm 4.5)	65.4	(\pm 2.5)
Age group (yrs)				
18–24	68.6	(\pm 4.5)	21.7	(\pm 3.1)
25–44	73.7	(\pm 2.0)	39.0	(\pm 1.5)
45–64	68.5	(\pm 3.0)	56.6	(\pm 2.0)
≥ 65	49.9	(\pm 5.8)	76.6	(\pm 2.1)
Socioeconomic status^{§§}				
At/Above poverty level	70.7	(\pm 1.8)	52.4	(\pm 1.2)
Below poverty level	69.7	(\pm 3.8)	30.4	(\pm 3.1)
Unknown	59.0	(\pm 5.6)	41.6	(\pm 4.3)
Total	69.7	(\pm 1.6)	49.6	(\pm 1.2)

* Persons who reported having smoked at least 100 cigarettes and who reported now smoking every day or some days.

[†] Persons who reported ever smoking 100 cigarettes during their lifetime.

[‡] Excludes 168 respondents with unknown smoking status.

[§] Confidence interval.

^{**} Excludes 257 respondents in unknown, multiple, and other race categories.

^{††} Estimates should be interpreted with caution because of the small number of cases.

^{‡‡} Persons aged ≥ 25 years.

^{§§} Poverty statistics are based on definitions developed by the Social Security Administration in 1964, subsequently modified by federal interagency committees in 1969 and 1980, and prescribed by the Office of Management and Budget as the standard to be used by federal agencies for statistical purposes.

From 1992 to 1993, daily smoking prevalence increased among high school seniors from 17.2% to 19.0% (1). To be effective, school-based prevention programs should begin in kindergarten and continue through high school. This intervention should be especially intensive in middle school and should be reinforced in high school. CDC has published guidelines for incorporating tobacco-use prevention and cessation strate-

Cigarette Smoking — Continued

gies in the early grades in schools (7). School-based programs should provide instruction about the short- and long-term physiologic and social consequences of tobacco use, social influences on tobacco use, peer norms regarding tobacco use, and refusal skills.

The findings in this report are subject to at least two limitations. First, because the 1992 and 1993 estimates are based on data collected during a 6-month period, these estimates may not be representative of annual prevalence. In particular, other data suggest that the restriction of the surveys to these periods may have minimized the true magnitude of declines in prevalence (National Household Survey on Drug Abuse, unpublished data, 1992 and 1993). Second, because these estimates are based on self-reported data, prevalences may be underestimated. However, underreporting is believed to be low in national prevalence surveys (8).

To sustain the decline in smoking prevalence, efforts must be intensified to discourage initiation and to promote cessation. Although 70% of smokers want to stop smoking and 34% attempt to quit each year, only 2.5% successfully stop smoking each year (9). The high rate of relapse is a consequence of the effect of nicotine dependence. Smokers who need assistance with stopping can receive self-help materials from local voluntary agencies, CDC (telephone [800] 232-1311 or [404] 488-5705), and the National Institutes of Health (telephone [800] 422-6237). Many smokers are addicted to nicotine and could potentially benefit from nicotine replacement therapy (NRT); NRT and other cessation assistance can be obtained from physicians and dentists. Information about formal cessation programs can be obtained from local voluntary agencies or health-care providers.

The health risks of cigarette smoking can be eliminated only by quitting; switching to lower "tar" and nicotine cigarettes is not a safe alternative (10). Comprehensive measures for promoting cessation and reducing the prevalence of smoking include increasing tobacco excise taxes, enforcing minors' access laws, restricting smoking in public places, restricting tobacco advertising and promotion, and conducting counter-advertising campaigns.

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Cigarette Smoking — Continued

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Current Trends

Abortion Surveillance: Preliminary Data — United States, 1992

For 1992, CDC received data about legal induced abortions from 52 reporting areas (the 50 states, New York City, and the District of Columbia). This report presents preliminary data for 1992.

In 1992, a total of 1,359,145 legal abortions were reported to CDC (Table 1), a decrease of 2.1% from the number reported for 1991 (1), and the number of live births decreased by 1.1% (2). As a result, the national abortion ratio (number of legal abortions per 1000 live births) decreased from 339 in 1991 to 335 in 1992 (Figure 1). The national abortion rate (number of legal abortions per 1000 women aged 15–44 years) also declined from 24 in 1991 to 23 in 1992. This rate increased each year from 1972 to 1980 (when it peaked [25]); since 1980, the rate has remained stable, fluctuating from 23 to 24. As in previous years, approximately 92% of women who had a legal abortion were residents of the state in which the procedure was performed.

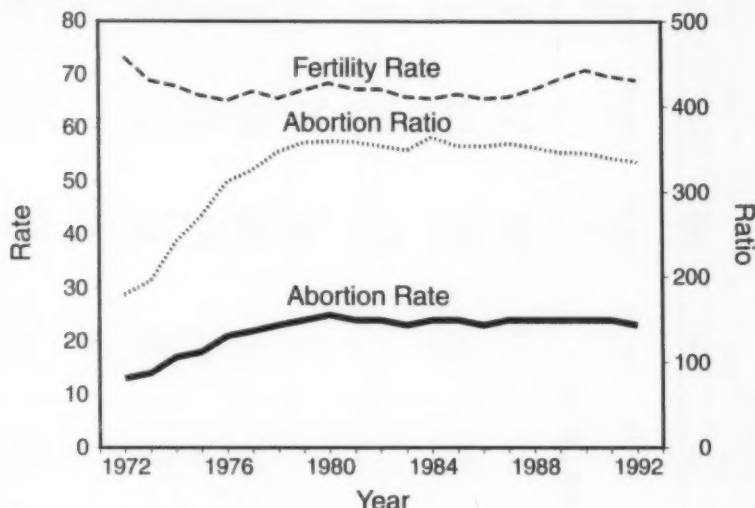
Women who obtained legal abortions in 1992 were predominately aged <25 years, white, and unmarried. Compared with 1991, a lower proportion of women who had abortions in 1992 had had live-born children (48% and 46%, respectively). Curettage (suction and sharp) remained the primary abortion procedure (approximately 99% of all such procedures). As in previous years, approximately half of legal abortions were performed during the first 8 weeks of gestation (Table 1): 14% of abortions were performed at ≤6 weeks, 15% at 7 weeks, and 21% at 8 weeks' gestation. As in previous years, approximately 89% of abortions were performed during the first 12 weeks of pregnancy.

Reported by: Statistics and Computer Resources Br, Div of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion, CDC.

Editorial Note: The annual number of abortions in the United States has remained relatively stable since 1980, varying each year by ≤5%. However, since 1990 (the year in which the number of abortions was highest), the number of abortions has decreased each year. In 1992, the national ratio of abortions to live births was lower than for any year since 1977, indicating that a greater proportion of pregnancies ended in a live birth (3). The national fertility rate (number of live births per 1000 women of reproductive age [15–44 years]) also peaked in 1990 and has declined somewhat since then (2).

As in previous years, most women who obtained an abortion were white. However, the abortion rate for black women is approximately three times that for white women (CDC, unpublished data, 1991). Differences in abortion by race may reflect differences in socioeconomic status, education level, contraceptive use, and access to family planning, contraceptive, and abortion services.

Abortion Surveillance — Continued

FIGURE 1. Fertility rate* and abortion ratio† and rate,‡ by year — United States, 1972–1992

*Live births per 1000 women aged 15–44 years.

†Number of legal induced abortions per 1000 live births.

‡Number of legal induced abortions per 1000 women aged 15–44 years.

Although the total number of legal induced abortions during 1992 was available for all 52 reporting areas, approximately 26% of the abortions were reported from states that do not have centralized reporting; these areas could not provide information on the characteristics of women obtaining abortions. Interpretation of temporal comparisons is constrained because the number of states that report characteristics varies each year.

Many states emphasize the prevention of unintended pregnancy, particularly among teenagers. Abortion and birth statistics both are essential to provide estimates of pregnancy rates. To assist efforts to prevent unintended pregnancy, an accurate assessment of abortion (including the number and characteristics of women obtaining legal abortions in all states) is needed on an ongoing basis. In 1992, most areas reported abortions at ≤ 8 weeks of gestation by week of gestation for the first time. This approach to reporting will assist in monitoring trends in legal abortions.

Additional statistical and epidemiologic information about legal induced abortions is available from CDC's automated Reproductive Health Information line at (404) 330-1230, which provides information by fax, voice recordings, or mail.

Abortion Surveillance — Continued

Type of procedure	88.6	92.8	95.5	97.5	98.6	98.8	98.8	98.9	98.9
Curettage	65.2	82.6	89.8	94.6	95.1	97.1	96.0	97.3	97.9
Suction	23.4	10.2	5.7	2.9	3.5	1.7	2.8	1.6	1.0
Sharp									
Intrauterine	10.4	6.0	3.1	1.7	1.1	0.9	0.8	0.7	0.7
instillation	1.0	1.2	1.4	0.8	0.3	0.3	0.4	0.4	0.4
Other ^{††}									
Weeks of gestation	34.0	47.0	51.7	50.3	48.7	49.8	51.6	52.3	52.6 ^{§§}
≤6	—	—	—	—	—	—	—	—	13.8 ^{§§}
7	—	—	—	—	—	—	—	—	15.2 ^{§§}
8	—	—	—	—	—	—	—	—	20.9 ^{§§}
9-10	30.7	28.1	26.2	26.6	26.4	25.8	25.3	25.1	24.6
11-12	17.5	14.4	12.2	12.5	12.7	12.6	11.7	11.5	11.6
13-15	8.4	4.5	5.1	5.9	6.6	6.6	6.4	6.1	5.9
16-20	8.2	5.1	3.9	3.9	4.5	4.2	4.0	3.9	4.1
≥21	1.2	0.9	0.9	0.8	1.1	1.0	1.0	1.1	1.2

*Per 1000 live births.

†Per 1000 women aged 15-44 years.

‡Preliminary data.

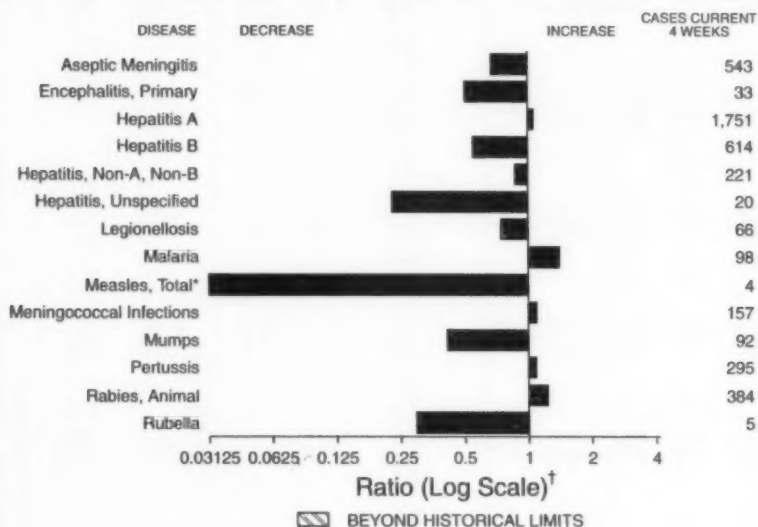
§Excludes unknown values. The number of areas reporting a given characteristic varied. For 1992, the number of areas reporting residence was 41; age, 42; race, 35; ethnicity, 21; marital status, 38; number of live births, 38; type of procedure, 38; and weeks of gestation, 38.

**For 1972-1976, data indicate number of living children.

††Includes hysterotomy and hysterectomy.

‡‡Data are for 34 reporting areas only.

(Continued on page 939)

FIGURE 1. Notifiable disease reports, comparison of 4-week totals ending December 17, 1994, with historical data — United States

*The large apparent decrease in the number of reported cases of measles (total) reflects dramatic fluctuations in the historical baseline. (Ratio (log scale) for week 50 measles (total) is 0.03125).

[†]Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE 1. Summary — cases of specified notifiable diseases, United States, cumulative, week ending December 17, 1994 (50th Week)

	Cum. 1994		Cum. 1994
AIDS*	72,888	Measles: imported	183
Anthrax	-	indigenous	693
Botulism: Foodborne	58	Plague	14
Infant	74	Poliomyelitis, Paralytic [‡]	1
Other	7	Psittacosis	39
Brucellosis	92	Rabies, human	2
Cholera	31	Syphilis, primary & secondary	19,416
Congenital rubella syndrome	6	Syphilis, congenital, age < 1 year [‡]	1,123
Diphtheria	1	Tetanus	36
Encephalitis, post-infectious	102	Toxic shock syndrome	176
Gonorrhea	378,599	Trichinosis	35
<i>Haemophilus influenzae</i> (invasive disease) [‡]	1,081	Tuberculosis	21,126
Hansen Disease	110	Tularemia	84
Leptospirosis	34	Typhoid fever	395
Lyme Disease	11,030	Typhus fever, tickborne (RMSF)	434

*Updated monthly to the Division of HIV/AIDS, National Center for Infectious Diseases; last update November 29, 1994.

[†]Of 1027 cases of known age, 293 (29%) were reported among children less than 5 years of age.

[‡]This case was vaccine-associated. The remaining 6 suspected cases with onset in 1994 have not yet been confirmed.

[§]Total reported to the Division of Sexually Transmitted Diseases and HIV Prevention, National Center for Prevention Services, through second quarter 1994.

TABLE II. Cases of selected notifiable diseases, United States, weeks ending December 17, 1994, and December 18, 1993 (50th Week)

Reporting Area	AIDS*	Aseptic Meningi- tis	Encephalitis		Gonorrhea		Hepatitis (Viral), by type				Legionel- losis	Lyme Disease
			Primary	Post-in- fectious			A	B	NA, NB	Unspeci- fied		
	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1993	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1994
UNITED STATES	72,888	7,804	634	102	378,599	385,032	22,407	10,966	4,106	398	1,499	11,030
NEW ENGLAND	2,589	308	18	5	7,779	7,561	279	305	124	15	76	2,547
Maine	79	31	5	-	87	77	24	11	-	-	5	27
N.H.	60	33	-	2	105	71	15	22	8	-	-	31
Vt.	34	36	3	-	35	24	14	-	-	-	-	13
Mass.	1,309	88	8	1	3,130	3,076	102	175	96	13	58	249
R.I.	241	120	2	2	457	417	27	8	20	2	12	47
Conn.	866	-	-	-	3,965	3,896	97	89	-	-	-	1,756
MID. ATLANTIC	21,304	905	60	19	41,674	45,367	1,607	1,426	443	9	244	6,953
Upstate N.Y.	2,006	443	35	3	9,995	9,953	519	375	217	5	59	4,312
N.Y. City	12,177	141	7	5	14,238	12,294	636	360	4	-	10	28
N.J.	4,655	-	-	-	5,089	5,558	278	356	187	-	41	1,303
Pa.	2,466	321	18	11	12,354	17,552	174	335	35	4	134	1,310
E.N. CENTRAL	5,883	1,495	160	22	74,452	82,179	2,408	1,089	300	12	436	134
Ohio	1,095	384	55	4	22,239	22,021	1,106	161	23	-	192	76
Ind.	589	197	12	1	8,766	8,328	359	175	10	-	105	14
Ill.	2,896	382	53	5	19,040	27,671	447	222	64	5	30	11
Mich.	960	525	36	12	17,501	17,606	334	406	200	7	79	33
Wis.	343	7	4	-	6,906	6,353	162	125	3	-	30	-
W.N. CENTRAL	1,502	422	34	8	21,520	20,890	1,118	639	107	12	94	285
Minn.	375	25	5	-	3,403	2,381	231	64	23	1	2	165
Iowa	96	118	1	1	1,576	1,508	64	26	13	11	33	17
Mo.	671	152	8	4	11,609	12,551	563	486	42	-	38	87
N. Dak.	22	13	4	-	34	52	5	1	-	-	4	-
S. Dak.	15	2	4	-	197	245	37	4	-	-	1	-
Nebr.	84	37	5	3	1,060	484	118	29	14	-	10	2
Kans.	239	75	7	-	3,641	3,669	100	29	15	-	6	14
S. ATLANTIC	17,469	1,533	143	30	106,379	96,631	1,414	2,212	606	55	336	839
Del.	247	37	1	-	1,892	1,507	17	5	1	-	26	78
Md.	2,526	248	22	4	17,202	16,000	214	399	32	16	89	379
D.C.	1,325	53	-	1	6,852	5,384	29	56	2	-	10	9
Va.	1,089	313	31	6	13,180	11,889	184	129	25	10	12	129
W. Va.	76	39	48	-	806	670	21	45	44	-	4	27
N.C.	1,152	218	40	1	27,052	23,941	139	276	53	-	27	77
S.C.	1,088	31	-	-	12,518	10,197	39	33	10	-	16	7
Ga.	2,071	50	1	-	3,899	4,660	33	532	185	-	99	106
Fla.	7,895	544	-	18	22,978	22,383	738	737	254	29	53	27
E.S. CENTRAL	1,942	514	39	3	44,384	44,169	659	1,110	890	2	77	42
Ky.	296	178	16	1	5,008	4,810	186	70	32	-	9	23
Tenn.	693	124	12	-	14,346	13,660	279	953	838	1	44	13
Ala.	554	163	8	1	14,133	15,735	122	87	20	1	13	6
Miss.	399	49	3	1	10,897	9,964	72	-	-	-	11	-
W.S. CENTRAL	6,982	854	50	2	45,650	43,187	3,247	1,509	595	71	46	128
Ark.	255	50	-	-	6,406	7,403	202	37	8	3	10	8
La.	1,146	34	8	-	11,555	11,560	151	167	181	1	14	2
Okla.	244	-	-	-	3,259	4,437	366	303	337	3	11	73
Tex.	5,337	770	42	2	24,430	19,787	2,528	1,002	69	64	11	45
MOUNTAIN	2,107	343	12	4	9,480	10,841	4,330	622	424	62	105	20
Mont.	26	8	-	-	84	84	24	23	15	-	16	-
Idaho	56	6	-	-	92	169	366	74	68	1	2	3
Wyo.	18	4	3	1	85	75	30	23	166	-	6	5
Colo.	763	134	3	-	3,237	3,666	575	99	73	17	21	-
N. Mex.	198	19	-	-	1,066	933	1,101	212	46	4	4	8
Ariz.	559	74	-	2	3,084	3,675	1,401	56	17	15	25	11
Utah	131	55	2	1	232	413	599	78	20	4	7	3
Nev.	356	43	4	-	1,600	1,826	234	57	19	14	24	1
PACIFIC	13,110	1,430	118	9	27,281	34,207	7,345	2,074	617	160	85	82
Wash.	856	-	-	-	2,783	3,600	337	74	72	2	8	-
Oreg.	550	-	-	-	571	1,122	803	85	22	1	-	-
Calif.	11,481	1,281	115	8	22,465	28,255	5,946	1,876	518	154	73	82
Alaska	40	18	3	-	864	628	202	11	-	-	-	-
Hawaii	183	131	-	1	598	604	57	28	5	3	4	-
Guam	1	22	-	-	197	98	44	6	1	12	3	-
P.R.	2,159	39	1	3	445	474	84	358	169	11	-	-
V.I.	49	-	-	-	41	91	-	1	-	-	-	-
Amer. Samoa	-	-	-	-	31	41	8	-	-	-	-	-
C.N.M.I.	-	-	-	-	45	78	8	1	-	-	-	-

N: Not notifiable

U: Unavailable

C.N.M.I.: Commonwealth of Northern Mariana Islands

*Updated monthly to the Division of HIV/AIDS, National Center for Infectious Diseases; last update November 29, 1994.

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending December 17, 1994, and December 18, 1993 (50th Week)

Reporting Area	Measles (Rubella)					Meningococcal Infections	Mumps		Pertussis			Rubella			
	Malaria	Indigenous		Imported*											Total
	Cum. 1994	1994	Cum. 1994	1994	Cum. 1994	Cum. 1993	Cum. 1994	1994	Cum. 1994	1994	Cum. 1994	Cum. 1993	1994	Cum. 1994	Cum. 1993
UNITED STATES	1,036	3	893	-	183	304	2,527	20	1,355	120	3,484	6,087	2	219	177
NEW ENGLAND	77	-	14	-	14	63	137	1	26	20	449	739	-	131	2
Maine	6	-	1	-	4	1	23	-	3	-	18	18	-	-	1
N.H.	3	-	1	-	-	2	7	-	4	2	84	155	-	-	-
Vt.	3	-	2	-	1	31	4	-	-	-	45	91	-	-	-
Mass.	34	-	2	-	6	18	61	-	3	17	255	377	-	125	5
R.I.	9	-	4	-	3	2	-	1	4	-	7	14	-	3	-
Conn.	22	-	4	-	-	9	42	-	12	1	40	84	-	3	-
MID. ATLANTIC	213	-	172	-	33	38	249	-	108	3	592	931	-	10	59
Upstate N.Y.	56	-	12	-	14	8	91	-	32	3	230	336	-	8	17
N.Y. City	79	-	11	-	3	19	11	-	13	-	157	91	-	1	22
N.J.	48	-	144	-	12	11	55	-	7	-	11	85	-	1	15
Pa.	30	-	5	-	4	-	92	-	56	-	194	417	-	-	5
E.N. CENTRAL	98	1	59	-	44	31	403	12	257	7	414	1,503	1	12	8
Ohio	15	-	15	-	2	9	117	3	74	7	157	434	-	-	1
Ind.	14	U	-	U	1	1	76	U	7	U	65	165	U	-	3
Ill.	39	-	17	-	39	9	117	-	106	-	94	426	-	3	1
Mich.	28	1	24	-	2	6	58	9	56	-	48	115	1	9	2
Wis.	2	-	3	-	-	6	35	-	14	-	50	363	-	-	1
W.N. CENTRAL	45	-	126	-	44	3	176	-	66	17	222	545	-	2	1
Minn.	14	-	-	-	-	-	18	-	5	13	100	319	-	-	-
Iowa	5	-	6	-	1	-	20	-	16	2	23	37	-	-	-
Mo.	13	-	118	-	42	1	87	-	39	-	44	140	-	2	1
N. Dak.	1	-	-	-	-	-	1	-	5	-	5	5	-	-	-
S. Dak.	-	-	-	-	-	-	9	-	-	2	26	8	-	-	-
Nebr.	5	-	1	-	1	-	13	-	1	-	11	14	-	-	-
Kans.	7	-	1	-	-	2	28	-	-	-	13	22	-	-	-
S. ATLANTIC	224	-	59	-	8	29	431	2	201	1	359	646	-	11	7
Del.	3	U	-	U	-	-	5	U	-	U	3	10	U	-	-
Md.	99	-	2	-	2	4	44	-	68	-	77	131	-	-	3
D.C.	15	-	-	-	-	-	6	-	-	-	10	14	-	-	-
Va.	37	-	1	-	2	4	68	2	44	-	36	65	-	-	-
W. Va.	-	-	36	-	-	-	14	-	3	-	5	8	-	-	-
N.C.	11	-	2	-	1	1	53	-	36	-	140	195	-	-	-
S.C.	5	-	-	-	-	-	33	-	8	-	14	73	-	-	-
Ga.	26	-	3	-	-	-	69	-	9	-	27	54	-	2	-
Fla.	28	-	15	-	3	20	141	-	33	1	47	96	-	9	4
E.S. CENTRAL	32	-	28	-	-	1	148	-	27	-	122	281	-	-	1
Ky.	12	-	-	-	-	-	38	-	-	-	59	38	-	-	1
Tenn.	10	-	28	-	-	-	35	-	8	-	22	172	-	-	-
Ala.	9	-	-	-	-	1	75	-	12	-	34	60	-	-	-
Miss.	1	-	-	-	-	-	-	-	7	-	7	11	-	-	-
W.S. CENTRAL	75	-	11	-	8	10	325	2	249	5	192	187	-	13	18
Ark.	3	-	-	-	1	-	44	-	5	-	27	12	-	-	-
La.	10	-	-	-	1	1	38	2	34	-	12	14	-	-	1
Okla.	7	-	-	-	-	-	33	-	23	5	32	78	-	4	1
Tex.	55	-	11	-	6	9	210	-	187	-	121	83	-	9	16
MOUNTAIN	39	2	152	-	17	7	164	1	153	65	477	444	-	5	11
Mont.	-	-	-	-	-	-	6	-	-	1	11	11	-	-	-
Idaho	2	-	1	-	-	-	17	-	10	63	150	99	-	-	2
Wyo.	1	-	-	-	-	-	9	-	3	-	-	1	-	-	-
Colo.	18	1	17	-	3	3	38	-	3	1	125	184	-	-	2
N. Mex.	3	-	-	-	-	-	15	N	N	-	33	39	-	-	-
Ariz.	9	1	3	-	1	3	48	-	95	-	131	69	-	-	2
Utah	4	-	131	-	2	-	19	1	26	-	24	36	-	4	4
Nev.	2	-	-	-	11	1	12	-	15	-	3	5	-	1	1
PACIFIC	233	-	72	-	15	122	494	2	268	2	657	811	1	35	70
Wash.	12	-	-	-	-	-	32	-	8	1	33	86	-	-	-
Oreg.	14	-	-	-	2	4	100	N	N	-	41	104	-	3	-
Calif.	190	-	56	-	9	96	348	2	238	1	561	604	1	27	41
Alaska	2	-	16	-	-	2	5	-	4	-	1	5	-	1	1
Hawaii	15	-	-	-	4	20	9	-	18	-	21	12	-	4	28
Guam	4	U	211	U	-	17	1	U	6	U	2	-	U	1	-
P.R.	3	-	13	-	-	358	15	-	2	-	2	11	-	-	-
V.I.	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Amer. Samoa	-	-	-	-	-	-	-	-	1	-	2	2	-	-	-
C.N.M.I.	1	U	26	U	-	63	-	U	2	U	-	1	U	-	-

*For measles only, imported cases include both out-of-state and international importations.

N: Not notifiable

U: Unavailable

† International

‡ Out-of-state

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending December 17, 1994, and December 18, 1993 (50th Week)

Reporting Area	Syphilis (Primary & Secondary)		Toxic- Shock Syndrome	Tuberculosis		Tula- remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1994	Cum. 1993	Cum. 1994	Cum. 1994	Cum. 1993	Cum. 1994	Cum. 1994	Cum. 1994	Cum. 1994
UNITED STATES	19,416	25,322	178	21,126	22,023	84	395	434	7,083
NEW ENGLAND	211	348	4	499	520	1	21	15	1,815
Maine	4	0	1	27	25	-	-	-	-
N.H.	4	25	-	15	17	-	-	-	207
Vt.	-	1	1	8	7	-	-	-	140
Mass.	90	122	2	262	291	1	17	7	702
R.I.	15	15	-	48	58	-	1	-	44
Conn.	98	177	-	139	122	-	3	8	722
MID. ATLANTIC	1,327	2,330	28	4,221	4,746	1	110	18	1,794
Upstate N.Y.	162	241	15	493	661	1	12	6	1,286
N.Y. City	562	1,183	-	2,460	2,693	-	72	1	-
N.J.	234	288	-	780	798	-	20	4	267
Pa.	369	618	13	488	504	-	6	7	241
E.N. CENTRAL	2,695	4,056	36	2,062	2,247	8	73	44	66
Ohio	1,083	1,140	8	334	303	1	7	27	4
Ind.	244	357	2	185	215	2	7	5	13
Ill.	792	1,542	12	1,053	1,189	3	46	10	19
Mich.	278	538	14	430	452	1	6	2	14
Wis.	298	479	-	60	88	1	7	-	16
W.N. CENTRAL	1,126	1,576	26	548	499	39	1	38	214
Minn.	49	56	1	126	73	1	-	-	17
Iowa	71	64	8	60	59	-	-	1	85
Mo.	942	1,326	7	232	243	25	1	19	26
N. Dak.	-	4	1	8	7	1	-	-	12
S. Dak.	1	2	-	25	14	2	-	13	39
Nebr.	11	10	4	19	23	3	-	1	-
Kans.	52	114	5	78	80	7	-	4	35
S. ATLANTIC	5,227	6,302	8	3,889	4,379	2	48	207	1,928
Del.	25	91	-	40	47	-	1	-	41
Md.	310	351	-	322	382	-	14	24	502
D.C.	210	323	-	107	156	-	1	-	3
Va.	788	644	1	292	415	-	8	19	418
W. Va.	9	12	-	77	72	-	-	2	80
N.C.	1,601	1,846	1	516	565	-	-	82	166
S.C.	775	895	-	365	384	-	-	20	172
Ga.	782	1,052	1	669	731	1	2	55	359
Fla.	727	1,088	5	1,505	1,627	-	22	5	187
E.S. CENTRAL	3,779	4,004	6	1,359	1,565	2	3	45	215
Ky.	212	330	2	315	360	2	1	9	25
Tenn.	967	1,137	3	401	489	-	2	29	71
Ala.	621	852	1	421	477	-	-	2	119
Miss.	1,979	1,685	-	222	239	-	-	5	-
W.S. CENTRAL	4,178	5,294	2	2,882	2,593	17	16	53	643
Ark.	462	538	-	272	185	16	-	11	25
La.	1,616	2,479	-	193	301	-	3	-	69
Okl.	111	272	2	232	164	1	3	35	41
Tex.	1,989	2,005	-	2,185	1,943	-	10	7	508
MOUNTAIN	223	240	13	490	533	9	12	14	135
Mont.	4	1	-	9	13	3	-	4	22
Idaho	2	-	3	12	12	-	-	-	3
Wyo.	2	8	-	9	6	-	-	2	19
Colo.	119	85	6	21	79	1	3	4	15
N. Mex.	19	24	-	65	59	1	1	2	8
Ariz.	39	94	2	223	235	-	3	1	45
Utah	8	11	2	51	30	2	2	-	13
Nev.	30	17	-	100	99	2	3	1	10
PACIFIC	650	1,172	53	5,176	4,941	5	111	-	273
Wash.	32	55	3	250	260	-	4	-	-
Oreg.	21	40	-	90	-	2	5	-	12
Calif.	590	1,061	46	4,531	4,385	2	97	-	231
Alaska	4	8	-	63	58	1	-	-	30
Hawaii	3	8	4	242	240	-	5	-	-
Guam	10	3	-	170	85	-	1	-	-
P.R.	287	479	-	159	213	-	-	-	60
V.I.	28	41	-	-	2	-	-	-	-
Amer. Samoa	1	-	-	4	4	-	1	-	-
C.N.M.I.	2	7	-	35	41	-	1	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,* week ending December 17, 1994 (50th Week)

Reporting Area	All Causes, By Age (Years)						P&I [†] Total	Reporting Area	All Causes, By Age (Years)						P&I [†] Total
	All Ages	≥65	45-64	25-44	1-24	<1			All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	631	448	103	50	17	13	34	S. ATLANTIC	1,453	912	247	214	42	36	71
Boston, Mass.	172	110	34	18	7	3	14	Atlanta, Ga.	188	109	31	31	8	9	3
Bridgeport, Conn.	49	36	5	4	2	2	1	Baltimore, Md.	295	183	51	49	6	6	28
Cambridge, Mass.	26	19	6	1	-	-	2	Charlotte, N.C.	119	72	24	15	4	4	4
Fall River, Mass.	36	30	4	2	-	-	-	Jacksonville, Fla.	132	92	18	13	3	5	11
Hartford, Conn.	56	37	10	5	3	1	-	Miami, Fla.	100	64	14	17	2	3	-
Lynn, Mass.	17	12	5	-	-	-	1	Norfolk, Va.	39	27	7	2	1	2	1
Lynn, Mass.	21	18	2	-	-	1	1	Richmond, Va.	101	56	22	17	4	2	5
New Bedford, Mass.	28	24	4	-	-	-	-	Savannah, Ga.	50	36	9	4	1	-	3
New Haven, Conn.	41	27	7	6	-	1	2	St. Petersburg, Fla.	80	50	6	4	-	-	4
Providence, R.I.	57	44	5	5	3	-	4	Tampa, Fla.	176	117	23	27	7	2	8
Somerville, Mass.	10	6	3	1	-	-	2	Washington, D.C.	182	99	40	34	6	3	4
Springfield, Mass.	42	27	9	3	1	2	1	Wilmington, Del.	11	7	2	1	-	-	-
Waterbury, Conn.	23	18	4	2	1	-	4	E.S. CENTRAL	914	551	176	103	47	37	58
Worcester, Mass.	53	42	5	3	-	3	4	Birmingham, Ala.	131	63	28	21	9	10	5
MID. ATLANTIC	2,806	1,853	556	283	59	55	162	Chattanooga, Tenn.	70	47	14	4	3	2	1
Albany, N.Y.	56	38	11	2	2	3	3	Knoxville, Tenn.	109	74	20	12	2	1	14
Allentown, Pa.	33	23	5	4	1	-	1	Lexington, Ky.	82	37	14	8	2	1	6
Buffalo, N.Y.	95	78	10	5	-	2	28	Memphis, Tenn.	243	160	45	14	10	14	17
Camden, N.J.	45	29	7	4	2	3	3	Mobile, Ala.	109	62	22	14	7	4	3
Elizabeth, N.J.	26	21	3	2	-	-	4	Montgomery, Ala.	55	36	10	5	2	2	2
Erie, Pa.	42	30	10	1	1	-	4	Nashville, Tenn.	135	72	23	25	12	3	10
Jersey City, N.J.	52	28	13	7	2	2	4	W.S. CENTRAL	1,498	948	297	176	40	37	94
New York City, N.Y.	1,516	949	322	192	24	29	50	Austin, Tex.	82	52	12	16	1	1	3
Newark, N.J.	82	29	20	10	3	-	1	Baton Rouge, La.	25	20	3	2	-	-	3
Paterson, N.J.	34	25	3	5	1	-	1	Corpus Christi, Tex.	U	U	U	U	U	U	U
Philadelphia, Pa.	400	272	86	37	16	9	24	Dallas, Tex.	237	142	50	34	4	7	5
Pittsburgh, Pa.	99	72	19	4	2	2	11	El Paso, Tex.	37	25	13	4	-	1	5
Reading, Pa.	17	11	4	2	-	-	6	Ft. Worth, Tex.	118	74	22	10	5	5	4
Rochester, N.Y.	128	96	25	1	2	2	11	Houston, Tex.	390	219	90	59	9	13	37
Schenectady, N.Y.	21	16	3	-	-	-	3	Little Rock, Ark.	71	45	13	7	6	-	9
Scranton, Pa.	27	23	4	-	-	-	2	New Orleans, La.	107	67	20	12	7	1	-
Syracuse, N.Y.	104	78	20	4	1	1	3	San Antonio, Tex.	245	167	49	21	3	5	21
Trenton, N.J.	37	21	10	2	2	2	3	Shreveport, La.	54	36	11	4	1	2	3
Utica, N.Y.	14	12	1	1	-	-	-	Tulsa, Okla.	114	87	14	7	4	2	4
Yonkers, N.Y.	U	U	U	U	U	U	U	MOUNTAIN	906	597	190	75	28	16	71
E.N. CENTRAL	2,330	1,480	423	228	115	83	133	Albuquerque, N.M.	106	67	22	10	5	1	5
Akron, Ohio	46	38	5	1	1	1	-	Colo. Springs, Colo.	57	41	13	2	-	1	4
Canton, Ohio	36	25	10	-	-	1	3	Denver, Colo.	98	59	23	10	1	5	2
Chicago, Ill.	449	188	78	103	66	14	22	Las Vegas, Nev.	133	85	28	16	4	-	7
Cincinnati, Ohio	205	136	46	12	6	5	19	Ogden, Utah	24	21	2	-	-	1	4
Cleveland, Ohio	170	106	41	12	3	8	8	Phoenix, Ariz.	204	119	44	27	10	4	22
Columbus, Ohio	167	105	37	14	1	10	9	Pueblo, Colo.	30	20	9	1	-	-	3
Dayton, Ohio	115	86	16	7	3	3	9	Salt Lake City, Utah	124	83	28	6	6	1	14
Detroit, Mich.	252	167	41	22	7	15	7	Tucson, Ariz.	131	102	21	3	2	3	10
Evansville, Ind.	44	36	6	2	-	1	4	PACIFIC	1,332	942	216	101	19	39	125
Fort Wayne, Ind.	71	48	14	3	5	1	4	Berkeley, Calif.	14	11	1	2	4	-	10
Gary, Ind.	20	10	4	2	2	1	-	Fresno, Calif.	100	71	18	6	4	-	10
Grand Rapids, Mich.	51	42	6	2	1	-	5	Glendale, Calif.	U	U	U	U	U	U	U
Indianapolis, Ind.	213	127	43	20	9	14	16	Honolulu, Hawaii	80	57	16	3	1	3	3
Madison, Wis.	45	37	3	4	1	-	5	Long Beach, Calif.	85	62	10	9	1	3	14
Milwaukee, Wis.	120	82	20	9	3	6	7	Los Angeles, Calif.	U	U	U	U	U	U	U
Peoria, Ill.	33	26	2	2	1	3	3	Pasadena, Calif.	34	24	6	3	-	1	1
Rockford, Ill.	45	29	11	2	2	1	4	Portland, Ore.	132	100	17	11	2	2	9
South Bend, Ind.	41	30	8	3	-	-	1	Sacramento, Calif.	U	U	U	U	U	U	U
Toledo, Ohio	136	103	23	7	3	-	6	San Diego, Calif.	192	128	36	9	4	15	26
Youngstown, Ohio	71	57	9	1	2	2	4	San Francisco, Calif.	133	75	23	18	1	3	20
W.N. CENTRAL	853	603	141	61	19	17	52	San Jose, Calif.	247	180	36	22	2	5	29
Des Moines, Iowa	203	148	33	13	5	3	22	Santa Cruz, Calif.	25	18	4	2	-	1	3
Duluth, Minn.	10	9	-	-	1	-	-	Seattle, Wash.	150	111	24	9	3	3	5
Kansas City, Kans.	19	12	2	5	-	-	1	Spokane, Wash.	59	40	12	4	1	2	1
Kansas City, Mo.	122	71	24	11	3	2	11	Tacoma, Wash.	81	65	13	3	-	-	5
Lincoln, Neb.	30	25	2	2	-	1	2	TOTAL	12,723 [‡]	8,334	2,351	1,291	386	333	810
Minneapolis, Minn.	162	118	27	12	1	4	7								
Omaha, Neb.	70	48	13	7	-	2	4								
St. Louis, Mo.	122	85	23	5	6	3	11								
St. Paul, Minn.	57	43	10	2	-	2	4								
Wichita, Kans.	58	44	7	4	3	-	-								

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

[†]Pneumonia and influenza.

[‡]Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

[§]Total includes unknown ages.

U: Unavailable.

*Abortion Surveillance — Continued**References*

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*Current Trends***State-Specific Trends Among Women
Who Did Not Receive Prenatal Care — United States, 1980–1992**

Lack of prenatal care is strongly associated with an increased risk for low birth-weight (<2500 g [<5 lbs 8 oz] at birth) infants, preterm delivery, and maternal and infant mortality (1). From 1980 through 1992, the nationally aggregated percentage of pregnant women who did not receive prenatal care increased by 31%—from 1.3% to 1.7% (2,3). Because nationally aggregated data can obscure variations among states, CDC analyzed state-specific data derived from birth certificates for 1980–1992 to examine trends among women who did not receive prenatal care. This report summarizes the findings of the analysis.

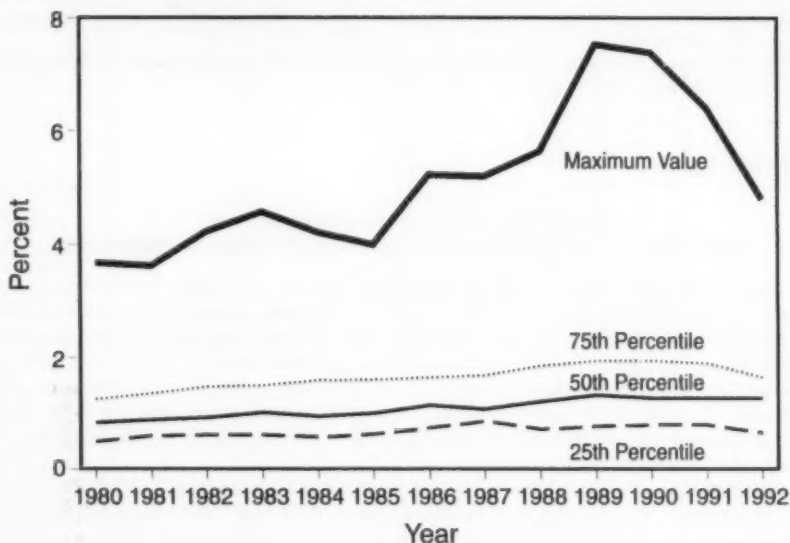
Prenatal-care data were ascertained from the section on the birth certificate indicating the month of pregnancy in which prenatal care was initiated. State-specific percentages for each year from 1980 through 1992 were ordered from lowest to highest to determine the 25th, 50th (i.e., median), and 75th percentiles and maximum value for each year. In addition, state-specific percentages for women who did not receive prenatal care were compared for 1980–1981 and 1991–1992 using the total number of births to women who did not receive prenatal care and the total number of births. Absolute change was calculated by comparing the percentages for 1980–1981 with those for 1991–1992.

From 1980 to 1989, the median state-specific percentage of births to women who did not receive prenatal care increased from 0.8% to 1.3% (Figure 1). Although patterns for the 25th and 75th percentiles were similar, the maximum value increased substantially—from 3.7% in 1980 to 7.5% in 1989; in 1992, the percentage declined to 4.8%. Percentages were consistently high in the District of Columbia, Florida, New Mexico, New York, and Texas.

For 1980–1981, the percentage of women who did not receive prenatal care ranged from 0.14% (Vermont) to 3.67% (New York) (Table 1); for 1991–1992, the percentages ranged from 0.32% (Utah) to 5.63% (District of Columbia). When compared with 1980–1981, during 1991–1992 the percentage of women who did not receive prenatal care declined in eight states (Florida, Kentucky, New Jersey, New York, Oklahoma, Rhode Island, South Dakota, and Utah) and increased in 42 states and the District of Columbia; in nine states, the increase was greater than 100% (Delaware, Illinois, Indiana, Louisiana, Michigan, Ohio, Pennsylvania, Vermont, and Wisconsin).

Reported by: Div of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion; Div of Health and Utilization Analysis, National Center for Health Statistics, CDC.

Prenatal Care — Continued

FIGURE 1. State-specific percentages* of women who did not receive prenatal care, by percentile and year — United States, 1980–1992

*Data from the 50 states and the District of Columbia were ranked. Observations 13 (25th percentile), 26 (50th percentile), 39 (75th percentile) and 51 (maximum value) were plotted for each year.

Editorial Note: Federal and state initiatives during the mid-1980s aimed to increase access to prenatal care by expanding Medicaid eligibility and increasing funding for maternal and child health block grants and other state-funded programs (4,5). The decrease in the percentage of births to women who did not receive prenatal care during 1991–1992 is the most substantial decrease recorded since 1969 (the first year data about prenatal-care initiation were reported). Despite these improvements, approximately 69,000 women did not receive prenatal care in 1992.

Health agencies commonly use aggregated data to describe national patterns in prenatal care in the United States. However, the findings in this and other reports indicate the importance of using state-specific data to fully elucidate and better understand long-term trends (6). In particular, these findings documented substantial variation among states for the percentage of women who did not receive prenatal care. For example, the comparison of data for 1980–1981 with 1991–1992 demonstrated slight decreases in the percentage of women who did not receive prenatal care in eight states and substantial increases in nine others.

The findings in this report are subject to at least two limitations. First, the overall increase in the percentage of women who did not receive prenatal care may have been related to improved case ascertainment. From 1980 to 1992, the percentage of

Prenatal Care — Continued

TABLE 1. Percentages of women who did not receive prenatal care, by state — United States, 1980–1981 and 1991–1992

State	1980–1981	1991–1992	Absolute change* from 1980–1981 to 1991–1992	% Change* from 1980–1981 to 1991–1992
Alabama	1.36	1.38	0.03	1.86
Alaska	0.68	0.80	0.12	17.60
Arizona	1.93	2.24	0.30	15.74
Arkansas	1.45	1.79	0.34	23.52
California	0.93	1.33	0.40	43.61
Colorado	0.79	1.03	0.25	31.53
Connecticut	0.47	0.50	0.03	5.47
Delaware	0.59	1.71	1.12	189.85
District of Columbia	3.10	5.63	2.53	81.75
Florida	2.05	1.85	-0.20	-9.90
Georgia	1.34	2.13	0.79	58.84
Hawaii	0.54	0.84	0.30	55.47
Idaho	0.81	1.02	0.21	25.80
Illinois	1.01	2.04	1.03	102.48
Indiana	0.92	2.21	1.28	138.82
Iowa	0.36	0.53	0.17	47.52
Kansas	0.51	0.76	0.25	48.00
Kentucky	1.94	1.55	-0.39	-19.97
Louisiana	1.21	2.53	1.33	109.92
Maine	0.82	1.06	0.24	29.69
Maryland	0.85	1.29	0.44	51.29
Massachusetts	0.39	0.50	0.11	28.72
Michigan	0.66	1.50	0.84	128.02
Mississippi	0.42	0.49	0.07	17.07
Minnesota	0.83	1.26	0.43	51.78
Missouri	0.92	1.72	0.79	85.82
Montana	0.74	0.87	0.13	18.18
Nebraska	0.41	0.60	0.19	45.33
Nevada	1.61	2.87	1.25	77.52
New Hampshire	0.42	0.79	0.37	87.83
New Jersey	1.63	1.25	-0.38	-23.38
New Mexico	1.73	2.88	1.15	66.68
New York	3.67	3.13	-0.54	-14.69
North Carolina	0.90	1.69	0.80	88.60
North Dakota	0.50	0.64	0.13	26.92
Ohio	0.69	1.45	0.76	109.77
Oklahoma	1.88	1.35	-0.54	-28.54
Oregon	0.69	0.97	0.28	40.97
Pennsylvania	0.68	1.80	1.12	165.33
Rhode Island	0.47	0.40	-0.07	-14.27
South Carolina	1.15	2.04	0.89	76.79
South Dakota	2.43	1.16	-1.28	-52.43
Tennessee	1.30	1.53	0.24	18.14
Texas	2.71	3.82	1.11	41.09
Utah	0.40	0.32	-0.09	-21.68
Vermont	0.14	0.38	0.24	173.66
Virginia	0.76	1.45	0.69	90.52
Washington	0.58	0.83	0.25	42.87
West Virginia	0.93	1.14	0.21	22.78
Wisconsin	0.37	0.76	0.39	103.86
Wyoming	0.79	0.88	0.09	11.71

*Manual calculations of the absolute and percentage changes may not be exact because of rounding.

Prenatal Care — Continued

women for whom initiation of prenatal care was unknown decreased from 2.8% in 1980 to 2.2% in 1992. However, the increase in the percentage of women who did not receive prenatal care may have been related to the decrease in the percentage of women who initiated prenatal care during the second trimester (from 18.1% in 1980 to 16.7% in 1992). The percentages of women who initiated prenatal care during the first or third trimester remained unchanged (74% and 4%, respectively). Second, estimates of the prevalence of nonreceipt of prenatal care may be inaccurate because a standard method of measuring initiation of prenatal care is not available. Although maternal postpartum interview data (7) and birth certificate data identify similar percentages of women who do not receive prenatal care, these sources may not identify the same women. For example, in a national sample of women who gave birth in 1988, among those who were identified either by the birth certificate or maternal interview as not receiving prenatal care, only 33% were identified by both sources (7).

Because the importance of prenatal care is widely accepted and efforts are made to provide such care to all women, nonreceipt of prenatal care should be considered a sentinel health event. A sample of these episodes should be investigated to identify and implement interventions. In particular, public health workers need to determine the reasons for nonreceipt of prenatal care (e.g., choosing not to obtain care, inability to pay for care, or lack of providers or transportation), and state health departments should consider the financial, programmatic, and social factors that are associated with nonreceipt of prenatal care.

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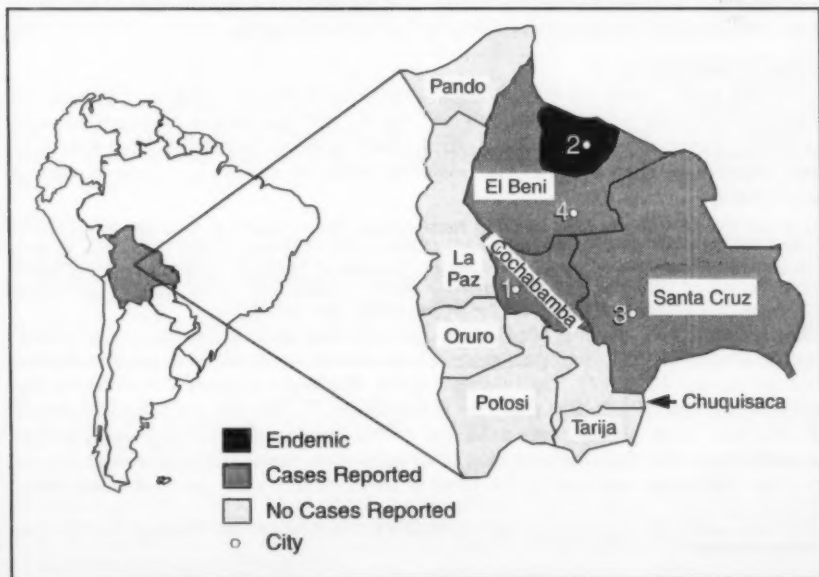
*International Notes***Bolivian Hemorrhagic Fever —
El Beni Department, Bolivia, 1994**

In July 1994, an outbreak of Bolivian hemorrhagic fever (BHF), which is caused by Machupo virus, began in northeastern Bolivia. This report describes the investigation and features of this outbreak, the search for additional cases of BHF in El Beni, Bolivia, and results of rodent investigations.

Initial Investigation

The outbreak initially occurred among members of an extended family residing in Magdalena (1994 population: approximately 5300) located in the north central Province of Iténez, El Beni Department (Figure 1). From July 4 through August 12, 1994, seven family members (aged 10 months–50 years) developed an illness characterized by fever, hypotension, subconjunctival and gingival bleeding, epistaxis, petechiae, tremor, and dysarthria. Six of these persons died; the person who had the index case survived. Laboratory studies performed on serum and tissue specimens from decedents confirmed the diagnosis of BHF by isolation of Machupo virus and detection of viral antigen in all five patients for whom specimens were available; the survivor developed enzyme-linked immunosorbent assay (ELISA) immunoglobulin M (IgM) and immunoglobulin G (IgG) antibodies to Machupo virus.

FIGURE 1. Area in which Bolivian hemorrhagic fever is endemic and four cities* in which suspected cases were identified — Bolivia, July 1–September 30, 1994



* 1) Cochabamba, 2) Magdalena, 3) Santa Cruz, and 4) Trinidad.

*Bolivian Hemorrhagic Fever — Continued***Search for Other Cases**

Following identification of the familial cluster, three additional persons in Bolivia with suspected BHF were reported to the National Secretary of Health through provincial health departments. On August 18, a broken test tube in a centrifuge exposed a 37-year-old laboratory technician in Santa Cruz to aerosolized blood from one of the family members who died. On August 29, the technician developed an acute febrile illness with lower back pain, arthralgias, and mild conjunctivitis. On August 30, intravenous therapy with the antiviral compound ribavirin was initiated for a presumptive diagnosis of BHF. She had no hemorrhagic manifestations and recovered from her illness. Machupo antigen detection and virus isolation studies on serum obtained before initiation of ribavirin treatment were negative, as were IgG and IgM antibody ELISAs on serum specimens collected 3 months after onset.

On August 28, a 41-year-old man residing in Magdalena (with no known link to any infected persons) developed an illness that included fever, chills, and hip pain. On September 2, he was transferred to a hospital in Cochabamba, Bolivia, and died on September 5 following a fulminant hemorrhagic clinical course. Machupo virus was isolated and viral antigen was detected in the patient's serum.

On September 3, a 52-year-old agricultural worker from Poponas, El Beni Department, developed a febrile hemorrhagic illness; on September 11, he was admitted to a hospital in Trinidad, El Beni Department. On September 13, intravenous ribavirin therapy was initiated for a presumptive diagnosis of BHF, and the patient recovered. The diagnosis of BHF was confirmed by detection of viral antigen and virus isolation from the patient's serum.

Family members of these three persons with presumptive or confirmed BHF cases and health-care workers in contact with these persons were monitored for febrile illness. However, illness was not noted in these patient contacts.

Rodent Investigation

During August and September 1994, rodent trapping was conducted in areas of potential exposure for the affected family. During 1811 trap-nights,* 84 rodents were captured, including nine *Calomys callosus*. Testing for antibodies to Machupo virus was negative for each of the 84 rodents. Virus isolation studies on captured rodents are pending.

Reported by: M Villagra, MD, National Hemorrhagic Fever Program, National Secretary of Health, Ministry of Human Development; L Suarez, MD, Regional Health Secretary, El Beni Department; R Arce, MD, Magdalena Hospital, Magdalena, Province of Iténez, El Beni Department, Bolivia. MG Moreira, MD, Pan American Health Organization, La Paz, Bolivia. Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases, CDC.

Editorial Note: BHF is a viral hemorrhagic fever known to be endemic only in Bolivia; first described in 1959, it caused outbreaks in small communities in eastern Bolivia throughout the 1960s (1). The etiologic agent, Machupo virus, is a member of the family *Arenaviridae* and is maintained in the rodent *C. callosus*, the natural reservoir (2). As with other arenaviruses, infection of the rodent host results in a persistent asymptomatic infection with shedding of virus in urine. Human infections are believed to occur following exposure to the virus in aerosolized rodent urine. A nosocomial

*The total number of traps set in 1 night multiplied by the total number of nights during which traps were set.

Bolivian Hemorrhagic Fever — Continued

outbreak of BHF in Cochabamba in 1971 suggested that person-to-person transmission also may occur by airborne or parenteral routes (3).

Following an incubation period of 1–2 weeks, patients infected with Machupo virus may develop an influenza-like illness with fever, malaise, and fatigue followed by the onset of headache, dizziness, myalgias, and severe lower back pain. Prostration, abdominal pain, anorexia, tremors, and hemodynamic instability may be followed by hemorrhagic manifestations, including bleeding from the oral and nasal mucosa and the gastrointestinal, genitourinary, and bronchopulmonary tracts (4). BHF can be diagnosed by virus isolation from acute serum or tissue specimens or by virus antigen detection using an ELISA. Antibodies can be detected using plaque-reduction neutralization, indirect immunofluorescence, or ELISAs. Because of the risk for laboratory-acquired infections with this highly lethal agent, tests with potentially infectious material should be performed in a biosafety level 4 laboratory (5).

Treatment of BHF employs supportive measures. Although uncontrolled trials have used convalescent immune plasma from survivors of BHF, evaluation of the effectiveness of this therapy has been limited by the lack of plasmapheresis capability and availability of qualified donors. Ribavirin, a broad-spectrum antiviral agent, has been effective against human Lassa fever and several arenavirus diseases in animal models. Patients infected with Junin virus, a closely related arenavirus, also have received the drug (6), but there is no definitive evidence concerning efficacy.

From 1959 through 1962, Bolivian health officials reported 470 cases of BHF with 142 deaths (case-fatality rate: 30%) (7). Until the cases described in this report, the last confirmed outbreak in Bolivia occurred in 1971 (3). The mode of transmission of BHF in the familial outbreak described in this report is unclear. Although no *C. callosus* were captured in the town of Magdalena, a low density of *C. callosus* was noted in rural areas around Magdalena where the index case had worked and traveled.

Previous trapping in Bolivia has shown fluctuations in population numbers and prevalence of infection among *C. callosus*, but the determining factors are not known (2,8). Previous cases of BHF occurred following rodent invasion of households in towns and exposure during campestral activities, including sleeping in primitive shelters (9). Infection with Machupo virus among travelers returning to the United States has not been recognized.

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Notice to Readers**Combined Issues of MMWR**

A December 30, 1994, issue of *MMWR* will not be published. Following that, the next issue will be Volume 43, Numbers 51 and 52, dated January 6, 1995, and will include the figure and tables on notifiable diseases and deaths for the weeks ending December 24 and December 31, 1994.

Notice to Readers**Draft Recommendations
for Prevention of Neonatal Group B Streptococcal Disease**

CDC is requesting public review of and comment on the draft document *Prevention of Group B Streptococcal Disease: A Public Health Perspective*. This document, which summarizes the literature and proposes prevention recommendations for neonatal group B streptococcal disease, has been published in the *Federal Register**. Photocopies can be made at U.S. Government Depository Libraries and other public and academic libraries. Reprints and information for patients are available from CDC's Division of Bacterial and Mycotic Diseases, National Center for Infectious Diseases, telephone (404) 488-4202 or fax (404) 488-4632. Comments must be received in writing by February 15, 1995, at CDC, Attention: GBS Recommendations Review Committee, Mailstop C-09, 1600 Clifton Road, NE, Atlanta, GA 30333; fax (404) 639-3970.

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